

**APPLICATION** To plan a trip downtown, you compare the costs of three different parking lots. ABC Parking charges \$5 for the first hour and \$2 for each additional hour or fraction of an hour. Cozy Car charges \$3 per hour or fraction of an hour, and The Corner Lot charges a \$15 flat rate for a whole day.

- a. Make a table similar to the one shown. Write recursive routines to calculate the cost of parking up to 10 hours at each of the three lots.

Hours parked	ABC Parking	Cozy Car	The Corner Lot
1			
2			
3			

- b. Make three different scatter plots on the same pair of axes showing the parking rates at the three different lots. Use a different color for each parking lot. Put the hours on the horizontal axis and the cost on the vertical axis.
- c. Compare the three scatter plots. Under what conditions is each parking lot the best deal for your trip? Use the graph to explain.
- d. Would it make sense to draw a line through each set of points? Explain why or why not.
- e. What would the equations be for each parking lot?
- f. You must write a convincing report to the sponsors of your club/team, which recommends the most cost effective parking lot choice to them. How would you thoroughly explain the best choice to the sponsors?